Amendments to the Claims

Sub B

1.   (Currently Amended) A method for reducing overhead and latency and handling packet loss in a voice and data over Internet Protocol (VoIP) data packet, transmitted between originating and destination gateways in an Internet telephony system, comprising the steps of:

(1)   compressing data streams from a plurality of concurrent calls from a plurality of channels into packets;

(2)   aggregating said packets into the larger data packet;, said data packet including information for synchronizing a current channel state at the originating gateway with a record of said channel state at the destination gateway; and

(3)   transmitting the data packet between the originating and destination gateways through a single virtual connection; and

(4)   controlling the transmission of the data packet between the originating and destination gateways by defining the format for the data packet, and updating and synchronizing the header information in the data packet.

2.   (Currently Amended) The method of claim 1, wherein step (2) further comprises the step of aggregating said packets into the data packet, wherein the data packet comprises providing a plurality of data frames and a plurality of header frames in the data packet, wherein said plurality of header frames comprising comprises at least one header frame selected from the group consisting of a time stamp header, local

network address header, IP address header and UDP header and at least ~~two header frames~~ one header frame selected from the group consisting of a version number header, ~~channel present header, channel header~~ and control information header.

3.   (Original) The method of claim 1, wherein step (1) further comprises the step of converting analog data streams to digital data streams prior to compressing said data streams into said packets.

4.   (Currently Amended) The method of claim 1, further comprising the step of transmitting a check sequence data packet at regular packet intervals, wherein the duration of said intervals is altered to reach a desired ~~configurable to~~ tradeoff between increased tolerance to loss and bandwidth, wherein a parity system and the information located inside of said check sequence data packet is used to regenerate missing or damaged data in the previously transmitted data packet.

5.   (Currently Amended) A method for regenerating missing or damaged data in a data packet transmitted in an Internet telephony system, comprising the steps of:

(1)   transmitting a check sequence data packet after the transmission of every third data packet, wherein information located inside of said check sequence data packet is used to regenerate ~~the~~ missing or damaged data in any of the preceding three data packets; and

~~(3)~~   (2)   using a parity system to regenerate the missing or damaged data.

6.   (Currently Amended) A system for reducing overhead and latency and handling packet loss in a voice and data over Internet Protocol (VoIP) data packet, transmitted over a UDP/IP connectionless protocol between originating and destination gateways, said system comprising:

media framing means for aggregating packets from a plurality of concurrent calls from a plurality of channels into the larger data packet;

transmission control means for ~~defining the format for the data packet, and updating and synchronizing header information in the data packet~~ providing information in the data packet to synchronize a current channel state at the originating gateway with a record of said channel state at the destination gateway;

redundancy means for regenerating missing or damaged data in the data packet; and

a single virtual connecting means for transmitting the data packet from the originating gateway to the destination gateway.

7.   (Currently Amended) The system of claim 6, wherein the data packet comprises a plurality of data frames and a plurality of header frames, comprising at least one header frame selected from the group consisting of a time stamp header, local network address header, IP address header and UDP header and at least two header frames selected from the group consisting of a version number header, ~~channel present header, channel header~~ and control information header.

8.   (Original) The system of claim 6, further comprising:

means for transmitting and receiving data streams;

means for converting analog data streams to digital data streams;

means for compressing digital data streams into said packets; and

means for transmitting a check sequence data packet after the

transmission of every third data packet.

9.   (Original) The system of claim 8, wherein said check sequence data

packet is formatted to regenerate said missing or damaged data with information located

inside of said check sequence data packet, and use a parity system to regenerate said

missing or damaged data.

10.   (Original) An Internet telephony system for regenerating missing or

damaged data in a data packet, comprising:

redundancy means for transmitting a check sequence data packet after

every three or more data packets; and

means for regenerating the missing or damaged data with the information

located inside of said check sequence data packet.

11.   (Original) The system of claim 10, further comprising means for

implementing a parity system to regenerate said missing or damaged data.

12.   (Currently Amended) A computer program product comprising a

computer useable medium having computer program logic recorded thereon for enabling

originating and destination gateways to transmit or receive data streams or data packets

in an Internet telephony system and for reducing VoIP packet overhead and latency and

handling packet loss, said computer program logic comprising:

a first computer program product means for compressing the data streams

from a plurality of concurrent calls from a plurality of channels into packets;

a second computer program product means for aggregating said packets

into the larger data packets;

a third computer program product means for transmitting the data packets

between the originating and destination gateways through a single virtual connection;

a fourth computer program product means for ~~controlling the transmission~~

~~of the data packets between the originating and destination gateways by defining the~~

~~format for the data packets, and updating and synchronizing header information in the~~

~~data packets~~ providing information in the data packet to synchronize a current channel

state at the originating gateway with a record of said channel state at the destination

gateway; and

a fifth computer program product means for determining if the data

packets contain missing or damaged data and regenerating said missing or damaged data

in the data packets.

13.   (Currently Amended) The computer program product of claim 12,

wherein said second computer program product means further comprises computer

program product means for aggregating packets into the data packets comprising a plurality of data frames and a plurality of header frames, wherein said header frames comprises at least one header frame selected from the group consisting of a time stamp header, local network address header, IP address header and UDP header and at least two header frames selected from the group consisting of a version number header, channel present header, channel header and control information header.

14.   (Original) The computer program product of claim 12, wherein said first computer program product means further comprises computer program product means for converting analog data streams to digital data streams prior to compressing the data streams into said packets.

15.   (Original) The computer program product of claim 14, wherein said fifth computer program product means further comprises computer program product means for transmitting a check sequence data packet after every three data packets and using a parity system and the information located inside of said check sequence data packet to regenerate said missing or damaged data.

16.   (Currently Amended) A computer program product comprising a computer useable medium having computer program logic recorded thereon for enabling originating and destination gateways to transmit or receive data streams or data packets in an Internet telephony system and for regenerating missing or damaged data in the data packet packets, comprising:

a first computer program product means for transmitting a check sequence

data packet at regular packet intervals, ~~configurable to~~ <u>wherein the duration of said</u>

<u>intervals is altered to reach a desired</u> tradeoff between increased tolerance to loss and

bandwidth; and

a second computer program product means for regenerating the missing or

damaged data <u>in a previously transmitted data packet</u> by using information located inside

of said check sequence data packet.

17.   (Currently Amended) The computer program product of claim ~~26~~ <u>16</u>,

further comprising a third computer program product means for using a parity system to

regenerate the missing or damaged data.

18.   (New) The method of claim 1, wherein said channel state identifies

whether a channel is open or on-line.

19.   (New) The method of claim 1, wherein step (2) further comprises the step

of providing in the data packet a channel present header for indicating whether a channel

is currently open and communicating.

20.   (New) The method of claim 1, wherein step (2) further comprises the step

of providing information in the data packet to instruct the destination gateway to start

using said record to deframe the data packet.

21.   (New) The system of claim 6, wherein said single virtual connecting means enables transmission of the data packet from said media framing means at the originating gateway directly to a second media framing means at the destination gateway.

22.   (New) The system of claim 6, wherein said single virtual connecting means enables transmission of the data packet from said transmission control means at the originating gateway directly to a second transmission control means at the destination gateway.